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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,253	01/14/2002	Gregory Cope	CIT1510-4	6270
28213	7590	12/04/2003	EXAMINER	
GRAY CARY WARE & FREIDENRICH LLP 4365 EXECUTIVE DRIVE SUITE 1100 SAN DIEGO, CA 92121-2133			PAK, YONG D	
		ART UNIT	PAPER NUMBER	
		1652		

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/047,253	COPE ET AL.
Examiner	Art Unit	
Yong D Pak	1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 25 August 2003.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 32-57 and 72-76 is/are pending in the application.  
4a) Of the above claim(s) 38 and 40 is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 32-37, 39, 41-57 and 72-76 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

13)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a)  The translation of the foreign language provisional application has been received.

14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) . . . . .  
4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_ .  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

### **DETAILED ACTION**

The amendment filed on August 25, 2003, amending claim 32, canceling claims 1-31 and 58-71 and adding claims 72-76, has been entered.

Claims 32-57 and 72-76 are pending.

#### ***Election/Restrictions***

Applicant's election with traverse of Group VI is acknowledged. The traversal is on the ground(s) that there is not a serious burden to search the different targets. This is found persuasive and all target proteins will be examined. The requirement is still deemed proper and is therefore made FINAL.

Claims 38 and 40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement.

#### ***Information Disclosure Statement***

The information disclosure statements (IDS) submitted on October 3, 2002 and October 6, 2003 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 32-57 and 72-76 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The mere recitation of the name "JAM" is insufficient to convey with clarity that which applicant sees as the invention. For example, "JAM" can be interpreted as a junctional adhesion molecule.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 32-37, 39, 41, 47-57 and 72-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glickman et al. in view of Deshaies et al. and Reiss et al.

Rpn11 is a JAB subunit. Glickman et al. (form 1449) teach that Rpn11 has deubiquitinating activity (pages 3158-3159).

Deshaies et al. (form PTO-892) teach that Sic1, cul1, cul2, cul3, cul4A, cul5 and ubiquitin ligases are all ubiquinated during the proteolysis in eukaryotic cytosol, wherein specific proteins are degraded by the 26S proteasome (pages 436, 437, 440 and 455, 457).

Reiss et al. (form PTO-892) teach that hydroxamates act as specific inhibitors of the binding of the NH<sub>2</sub>-terminal residue of proteins.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to identify agents that affect the activity of the Rpn11 protein, deconjugating ubiquitin from its modifier protein. The motivation of modifying activity of the Rpn11 protein is to regulate ubiquitination of proteins in the cell. One of ordinary skill in the art would have had a reasonable expectation of success since a person of ordinary skill in the art would reasonably expect that Rpn11 would remove or deconjugate ubiquitin from an ubiquitin modified protein.

Claims 32 and 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glickman et al. in view of Szalay et al.

Rpn11 is a JAB subunit. Glickman et al. (form 1449) teach that Rpn11 has deubiquitinating activity (pages 3158-3159).

Luciferase and other fluorescent proteins such as green fluorescent proteins are used routinely in the art to monitor protein cleavage (Szalay et al. - U.S. Patent 5,976,796).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to identify agents that affect the activity of the Rpn11 protein, deconjugating ubiquitin from its modifier protein comprising a fluorescent marker. The motivation of modifying activity of the Rpn11 protein is to regulate ubiquitination of proteins in the cell and the motivation of using a luciferase or a GFP is to monitor deconjugation/deubiquitination of the modifier protein by a detectable signal. One of ordinary skill in the art would have had a reasonable expectation of success since a person of ordinary skill in the art would reasonably expect that Rpn11 would remove or deconjugate ubiquitin from an ubiquitin modified target protein and the use of fluorescent proteins/markers are well known and practiced in the art.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Pak whose telephone number is 703-308-9363. The examiner can normally be reached 6:30 A.M. to 5:00 P.M. Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 703-308-3804. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Yong D. Pak  
Patent Examiner

December 1, 2003



PONNATHAPU ACHUTAMURTHY  
SUPERVISORY PATENT EXAMINER  
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